## Abstract.

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Method for automated measurement of the ohmic rotor resistance  $(R_{\rm r})$  of an asynchronous machine (1) controlled via an inverter (8) while being acted upon by a nonrotating field, the method involving

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a. measuring the ohmic stator resistance  $(R_s)$ , the leakage inductances  $(L_{\sigma s},\ L_{\sigma r})$  and the main inductance  $(L_m)$  of the asynchronous machine,

b. leading a testing signal  $(U_{8a})$  being formed by a predetermined direct signal with a superimposed alternating signal to a phase winding (a) of the asynchronous machine, the frequency of the alternating signal corresponding approximately to the nominal slip frequency  $(f_8)$  of the asynchronous machine (1),

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- c. measuring the amplitude and the phase  $(\phi)$  of the phase signal (  $\overline{\textbf{I}}_{sa})$  resulting from the testing signal, and
- d. calculating the ohmic rotor resistance  $(R_{\rm r})$  from the measured values according to a) and c).

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Measuring the ohmic rotor resistance in accordance with this method can be performed in a very short time, when the inductances and the ohmic stator resistance are known. Further, current displacement does not appear due to the

30 low frequency of the alternating signal.

Fig. 1